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DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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April 13, 1993

Mr. Gary Nielson
East Carbon Development Company
Manager Landfill Operations
1111 West Highway 123
East Carbon, Utah 84520

Dear Mr. Nielson:

Re: Initial Review of ECDC Clay Mine, East Carbon Development Company, M/015/062, Emery County, Utah

The Division has completed its review of your Large Mine Notice of Intention received March 17, 1993. The application is conceptually complete, but several sections will require further clarification. The Division will be ready to grant tentative approval of the plan, after the following comments are addressed. Our review comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion.

General Comments

It appears that the majority of the proposed site will encompass the earlier disturbance, created by the Pagano Clay Project. The Division suggests that the Pagano Clay permit be transferred to ECDC, to make this transition a lot less complicated (instead of having two mine permits overlapping each other in the same area). The operator of the Pagano Clay Project (Mr. Harold Marston) is currently having the project's reclamation permit approved. Once approved the reclamation permit can be easily transferred to ECDC.

R647-4-104 Operator's, Surface and Mineral Ownership

Please provide a phone number where you may be reached during regular business hours. (AAG)

In the March 18, 1993, "corrections" letter, it was requested that Harold Marston's name be deleted from the application as company representative and substituted with Gary Nielson. Please provide a correct version of page 2 of the LMO-NOI to be inserted into the plan. In addition, we will need a new signature page (page 10 LMO-NOI) with Mr. Nielson's signature in order to make this change. To provide you with these pages, we have enclosed an extra LMO form with this letter. (AAG)

R647-4-105 Maps, Drawings & Photographs

105.2.11 - Proposed surface facilities (buildings, roads, ponds, etc.)

Please provide a description of any onsite fuel storage facilities. Specifically, the type and estimated volume of any fuels. Also describe any spill prevention, containment and control measures to be taken. (AAG)

105.2.12 - Border outlining Acreage

Please clarify whether your proposed operations will only take place on the already disturbed areas. If any activities are proposed outside of the existing disturbed boundaries you will need to indicate those areas on the exhibits. If you propose to use the alternate facilities location shown on the exhibits, that area will also need to be outlined with a disturbed area boundary and included in the disturbed area calculations. (AAG)

105.3.17 - Base Maps

The operator needs to provide a map which shows the post-mining reclamation applications (reclamation treatments map) to be implemented once mining in an area is finished. For example, if some areas are to receive topsoil while others will not, this should be indicated on the map. Also, road reclamation may require deep ripping (> 24"), while other compacted areas will require shallower (6-12") scarification/ripping. (HWS)

Please provide an accurate scale with these maps, so that reliable measurements can be taken from them. (AAG)

R647-4-106 Operation Plan

In the beginning of the mine plan application it states that no more than 20 acres will be disturbed at any one time. The operation plan section of the LMO-

NOI form lists 18 acres of disturbance. Please clarify which amount of acreage you wish to include in the bonded, permit area. (AAG)

106.8 - Depth to groundwater, overburden material & geologic setting

An estimate of anticipated depth to groundwater is necessary for the general mine site area(s). Will the excavated pits intercept the local groundwater table? Please describe and justify your answer to this question. (DWH)

A better description of the geologic setting of the area is requested. "Rocks in the Cretaceous Age" is not sufficient to describe the general geology of the area. The soils description is useful information, but should be included under the soils section of the application. (DWH)

R647-4-107 Operation Practices

107.1.12 - Disposal of trash, debris

Please explain your method of disposing of trash and debris generated at the site. (HWS)

107.1.14 - Posting warning signs

Warning signs must be posted onsite were hazardous areas exist. (AAG)

107.1.15 - Construction of berms, fences

Depending on the extent and depth of the quarry it may be necessary to berm or fence the perimeter of the pit during operations to prevent hazards to the public. If the highwall/s are not too extreme or extensive it may not be necessary to construct barricades. (AAG)

107.2 and 107.3 - Drainages to minimize damage and Erosion Control

Will runoff control measures need to be implemented on this site? It is necessary to insure that disturbed area drainage does not impact natural drainage ways, or does not commingle with natural drainage unless first treated (i.e. passed through straw bales or silt fence, settling basin, etc.) especially in areas where disturbed area runoff will directly impact a perennial stream. (HWS)

107.5 - Suitable soils removed & stored

The operator mentioned that most of the site has been disturbed. Therefore, topsoil collection from previously disturbed areas is not feasible. The operator will need to salvage and stockpile soils from any virgin (presently undisturbed) areas encountered during mining operations. On the appropriate map (and/or in the text), please identify those areas where topsoil will be stripped. How will it be stripped and where will it be stockpiled? Soil stockpile areas should be identified on the maps. Once the soil is stockpiled on the ground, the stockpiles need to be protected with signs and berms (or silt fences, revegetated, etc.). (HWS)

R647-4-109 Impact Assessment

109.1 - Surface & groundwater systems

The operator's application states that the operation will not interfere with any surface or groundwater systems. How was this determination made? Supporting documentation/information to justify this statement is required. (DWH)

What impact will the operation have on the intermittent drainages shown on Exhibit III? What actions, if any, will be taken to mitigate these impacts? (AAG)

109.4 - Slope stability, erosion control, air quality, public health & safety

The operator needs to establish the fact that an air quality permit has already either been obtained or has been applied for. Please explain the status of this permit and its requirements in relation to your operation, in your response to this letter. Acquisition of an air quality permit is not a precondition of approval by this Division.(HWS)

R647-4-110 Reclamation Plan

110.2 - Roads, highwalls, slopes, leach pads, impoundments, drainages, pits, trenches, ponds, drill holes, etc. will be reclaimed

Please explain how the access roads will be reclaimed. Will they be reclaimed completely or partially? If partially, to what degree of reclamation will they be reclaimed? Please indicate whether or not concurrence for road reclamation has been obtained with State Lands and Forestry, for portions of the road system which will impact their lands. (HWS)

R647-4-111 Reclamation Practices

111.2 - Reclamation of natural stream channels

It appears that natural drainages may be intercepted/impacted by mining activities (refer to map/exhibit no. III.) Reclamation must be performed such that the channels will be left in a stable condition capable of passing reasonably expected flows thereby avoiding or minimizing future damage to the hydrologic system. Please identify those drainages that may be impacted and describe how they will be reclaimed. (DWH)

R647-4-112 Variance

The Division will grant a variance for soils salvage, but not for revegetation on areas associated with the previously disturbed areas onsite. Revegetation will be expected to meet the 70% revegetation standard by the addition of mulch and fertilizer. All areas not yet disturbed by previous mining activity, must be addressed as new areas under the mining rules. Where solid rock outcroppings will be encountered by the operation, a variance can be granted. However these areas must be identified. (HWS)

4-113 Surety

Please review the attached reclamation surety estimate prepared by the Division. If adequate, please provide the Division with a surety as soon as possible. We have enclosed a reclamation contract form and surety form. (AAG)

If you have any questions regarding this review, please contact me, Holland Shepherd, or Tony Gallegos of the Minerals Staff. Thank you for your efforts in assembling this permit application and for your cooperation in completing this permitting action.

Sincerely,

D. Wayne Hedberg

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Enclosures
cc: Lowell P. Braxton, DOGM
M015062.rvw

RECLAMATION ESTIMATE — DRAFT

East Carbon Development Company(ECDC) — file M15-62.WQ1

ECDC Clay Mine — last revision 03/03/93

M/015/062 — Emery County

Prepared by Utah State Division of Oil, Gas & Mining

Reclamation Details

-Post-mine land use is wildlife grazing and wildlife habitat
-All structures & equipment to be removed from the site
-Facilities/equipment: crusher, loader, dozer, blade, water truck, scrapers
-All compacted areas (loadouts, stockpile pads) to be ripped
-All trash and debris removed from site; no burning or burial onsite
-All highwalls/slopes regraded to 2h:1v or less
-All post-law roads to be regraded & ripped
-No topsoil was salvaged; little topsoil exists at site
-Entire disturbed area to be drill seeded, fertilized, mulched
-Disturbed area includes mining sites, new roads & facilities
-Individual acreages used below were taken from the LMO-NOI form
-Estimated total disturbed acreage = 18.0 acre

Activity	Amount		$/unit	$
Rip facility areas(0.5mph)	0.5	acre	463	232
Rip new roads (0.5mph)	1.5	acre	463	695
Regrade mine areas(1.0ft)	16	acre	327	5,232
Regrade facilities & roads	2	acre	327	654
Re-establish drainage channel	1,000	LF	0.50	500
Remove trash & debris	18	acre	50	900
Drillseed, fertilize, mulch	18	acre	400	7,200
Mobilization	2	equip	1,000	2,000
		Subtotal		17,412
	Add 10% contingency			1,741
		1993-$ Subtotal		19,153
	Add 5 yr escalation at 1.42%			1,399
		Total 1998-$		20,552
	Rounded Total in 1998-$			$20,600
	Average cost per acre =			$1,144